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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/625,352 | 07/23/2003 | Steven D. Clark | NOR / 1119 | 8607 |
| 37172 | 7590 | 09/19/2005 | EXAMINER | |
| WOOD, HERRON & EVANS, LLP (NORDSON) 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202 | | | DEL SOLE, JOSEPH S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1722 | |

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|-------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/625,352 | CLARK, STEVEN D. | |
| | Examiner Joseph S. Del Sole | Art Unit 1722 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
 - 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 July 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/27/03 & 1/5/05</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-24, drawn to an apparatus, classified in class 425, subclass 131.5.
 - II. Claims 25-31, drawn to a process, classified in class 264, subclass 103.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another and materially different apparatus such as an apparatus including a collector for the filaments.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with William R. Allen (by Examiner Tentoni, GAU1732) on 24 August 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 25-31 withdrawn from further

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consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "118" and "120". The Examiner suggests an Applicant-review of the drawings and specification to make sure that these are the only reference numbers from the specification not in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 11, 16-24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is vague and indefinite because it is unclear whether "said second equalizer" at line 9 actually refers to the second equalizer of claim 8. It appears that the intended described equalizer at line 9 is actually --said fourth equalizer--. The applicant should review this and clarify the claim.

Claim 16 is vague and indefinite because it is unclear what structural features are represented by "a plurality of liquid-carrying channels", "plurality of liquid passageways" and "a central liquid inlet passageway". The structures are not clearly defined in the claim and some of the terms lack clarifying support in the specification. The Applicant should set forth the features in the drawings and specification that related to the claimed features.

Claim 21 is vague and indefinite because it is unclear whether it should actually be dependent on claim 7. Claim 21 recites a limitation towards a third equalizer (line 2), however no second equalizer is ever claimed in the parent claims.

8. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: manner in which the first and second linear flow equalizers are connected.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-4, 7 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hodan et al (5,620,644).

Hodan et al teaches:

Claim 1: an apparatus for distributing material supplied from inlets in a cross-machine direction (Fig 1);

a first linear flow equalizer (Fig 1, # 11 pathway for #17) including a first plurality of flow passageways of substantially equal length that divide a flow of a first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in the cross machine direction;

Claim 2: a spinneret communicating with the passageways (Fig 1, #16);

Claim 3: a second linear flow equalizer (Fig 1, #13) including a second plurality of flow passageways of substantially equal length that divide a flow of a second thermoplastic material into individual streams having a spaced relationship in the cross-machine direction;

a combining plate capable (Fig 1, #15) of combining streams to form multi-component filaments;

Claim 4: a first plurality of elongated slots (Fig 2, #s 31 and 32) each extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid inlets;

a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 52 #20);

Claim 7: the first plurality of flow passageways divide the flow of the first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in a machine direction orthogonal to the cross-machine direction (Figs 1 and 2);

Claim 21: a third equalizer plate downstream of the inlet plate, the third equalizer plate having a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Fig 1);

Claim 22: each of the plurality of liquid-carrying channels includes a plurality of intersecting linear segments that extend symmetrically in the cross-machine direction (Fig 2);

Claim 23: the plurality of linear segments extend symmetrically in a machine direction orthogonal to the cross-machine direction (Figs 1, 2 and 4);

Claim 24: the plurality of liquid-carrying channels branch such that the first plurality of throughholes are arranged in substantially parallel first and second rows aligned in the cross-machine direction (Fig 1).

11. Claims and 1-4, 7-10, 13-14 and 16-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hills (5,562,930).

Hills teaches

Claim 1: an apparatus for distributing material supplied from inlets in a cross-machine direction (Fig 1);

a first linear flow equalizer (Fig 1, the path taken by the fluid through #17) including a first plurality of flow passageways of substantially equal length that divide a flow of a first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in the cross machine direction;

Claim 2: a spinneret communicating with the passageways (Fig 1, #15);

Claim 3: a second linear flow equalizer (Fig 1, the path taken by the fluid through #18) including a second plurality of flow passageways of substantially equal length that divide a flow of a second thermoplastic material into individual streams having a spaced relationship in the cross-machine direction;

a combining plate capable of combining streams to form multi-component filaments (Figs 7, 14 and 21);

Claim 4: a first plurality of elongated slots each extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid inlets (Fig 5, #35);

a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 1, #36);

Claim 7: the first plurality of flow passageways divide the flow of the first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in a machine direction orthogonal to the cross-machine direction (Fig 1);

Claim 8: a linear flow equalizer for distributing thermoplastic material supplied to a spin pack of a meltspinning apparatus having a cross-machine direction (Fig 1);

an inlet plate (Fig 1, #11) having a plurality of liquid passageways spaced substantially equidistantly from each other in the cross-machine direction;

a first equalizer plate positioned downstream from the inlet plate and having a first plurality of elongated slots each centered about one of the plurality of liquid passageways, each one of the first plurality of elongate slots extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid passageways (Fig 11, #72);

a second equalizer plate positioned downstream from the first equalizer plate, the second equalizer plate having a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 11, #73);

Claim 9: a combining plate configured to combine flowable thermoplastic material from the first plurality of throughholes with another flowable thermoplastic material to generate a multicomponent filament (Fig 11, #15);

a spinneret plate coupled in fluid communication with the combining plate (Fig 1, the face of #15);

Claim 10: flow paths from each of the plurality of liquid passageways to each of the first plurality of throughholes are substantially equal and substantially symmetrical in the cross-machine direction (Fig 1);

Claim 13: the first plurality of elongated slots are arranged in substantially parallel first and second rows in the cross-machine direction (Fig 1);

Claim 14: the first plurality of throughholes are arranged in substantially parallel first and second rows in the cross-machine direction (Fig 1);

Claim 16: the inlet plate includes a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Fig 1);

Claim 17: each of the plurality of liquid-carrying channels includes a plurality of intersecting linear segments that extend symmetrically in the cross-machine direction (Fig 11);

Claim 18: the plurality of linear segments extend symmetrically in a machine direction orthogonal to the cross-machine direction (Fig 1);

Claim 19: the plurality of liquid-carrying channels branch such that the first plurality of throughholes are arranged in substantially parallel first and second rows aligned in the cross-machine direction (Fig 1);

Claim 20: the inlet plate includes a downstream surface carrying the plurality of liquid-carrying channels, and a second plurality of throughholes upstream of the first equalizer plate, each of the second plurality of throughholes substantially registered in centered alignment with one of the first plurality of elongated slots (Fig 1);

Claim 21: a third equalizer plate downstream of the inlet plate, the third equalizer plate having a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Fig 1);

Claim 22: each of the plurality of liquid-carrying channels includes a plurality of intersecting linear segments that extend symmetrically in the cross-machine direction (Fig 11);

Claim 23: the plurality of linear segments extend symmetrically in a machine direction orthogonal to the cross-machine direction (Fig 1);

Claim 24: the plurality of liquid-carrying channels branch such that the first plurality of throughholes are arranged in substantially parallel first and second rows aligned in the cross-machine direction (Fig 1).

12. Claims 1-5, 7-10, 13-14, 16 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Dugan (5,736,083).

Claim 1: an apparatus for distributing material supplied from inlets in a cross-machine direction (Fig 1);

a first linear flow equalizer including a first plurality of flow passageways of substantially equal length that divide a flow of a first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in the cross machine direction (Fig 1, the path followed by the material through #4a);

Claim 2: a spinneret communicating with the passageways (Fig 1, #14);

Claim 3: a second linear flow equalizer including a second plurality of flow passageways of substantially equal length that divide a flow of a second thermoplastic

material into individual streams having a spaced relationship in the cross-machine direction (Fig 1, the path followed by the material through #4b);

a combining plate (Fig 1, #11) capable of combining streams to form multi-component filaments;

Claim 4: a first plurality of elongated slots each extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid inlets (Fig 1, the slots of plate #5);

a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 1, #7);

Claim 5: a second plurality of elongated slots each extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the first plurality of throughholes (Fig 1, the slots of plate #11);

a second plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the second plurality of elongated slots (Fig 1, #13);

Claim 7: the first plurality of flow passageways divide the flow of the first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in a machine direction orthogonal to the cross-machine direction (Fig 1);

Claim 8: a linear flow equalizer for distributing thermoplastic material supplied to a spin pack of a meltspinning apparatus having a cross-machine direction (Fig 1);

an inlet plate having a plurality of liquid passageways spaced substantially equidistantly from each other in the cross-machine direction (Fig 1, #2);

a first equalizer plate positioned downstream from the inlet plate and having a first plurality of elongated slots each centered about one of the plurality of liquid passageways, each one of the first plurality of elongated slots extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid passageways (Fig 1, #5);

a second equalizer plate positioned downstream from the first equalizer plate, the second equalizer plate having a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 1, #8);

Claim 9: a combining plate configured to combine flowable thermoplastic material from the first plurality of throughholes with another flowable thermoplastic material to generate a multicomponent filament (fig 1, #11);

a spinneret plate coupled in fluid communication with the combining plate (Fig 1, #14);

Claim 10: flow paths from each of the plurality of liquid passageways to each of the first plurality of throughholes are substantially equal and substantially symmetrical in the cross-machine direction (Fig 1);

Claim 13: the first plurality of elongated slots are arranged in substantially parallel first and second rows in the cross-machine direction (Figs 1 and 2);

Claim 14: the first plurality of throughholes are arranged in substantially parallel first and second rows in the cross-machine direction (Figs 1 and 2);

Claim 16: the inlet plate includes a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Fig 1);

Claim 20: the inlet plate includes a downstream surface carrying the plurality of liquid-carrying channels, and a second plurality of throughholes upstream of the first equalizer plate, each of the second plurality of throughholes substantially registered in centered alignment with one of the first plurality of elongated slots (Fig 1);

Claim 21: a third equalizer plate downstream of the inlet plate, the third equalizer plate having a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Fig 1, #11).

13. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Schrenk (3,687,589).

Claim 1: an apparatus for distributing material supplied from inlets in a cross-machine direction (Fig 1);

a first linear flow equalizer including a first plurality of flow passageways of substantially equal length that divide a flow of a first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in the cross machine direction (Fig 1, #s 30 and 31);

Claim 6: a sheet-forming plate downstream of the linear flow equalizer, the sheet-forming plate having a curved surface positioned for intercepting liquid exiting from the first plurality of flow passageways (Fig 1, #24).

14. Claims 1, 6, 8, 12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakunaga et al (4,732,716).

Claim 1: an apparatus for distributing material supplied from inlets in a cross-machine direction (Fig 4);

a first linear flow equalizer including a first plurality of flow passageways of substantially equal length that divide a flow of a first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in the cross machine direction (Fig 4, the pathways of either #46 or #47);

Claim 6: a sheet-forming plate downstream of the linear flow equalizer, the sheet-forming plate having a curved surface positioned for intercepting liquid exiting from the first plurality of flow passageways (Fig 4, #s 48 and 49);

Claim 8: a linear flow equalizer for distributing thermoplastic material supplied to a spin pack of a meltspinning apparatus having a cross-machine direction;

an inlet plate (Fig 4, #44) having a plurality of liquid passageways spaced substantially equidistantly from each other in the cross-machine direction;

a first equalizer plate (Fig 4, #42) positioned downstream from the inlet plate and having a first plurality of elongated slots each centered about one of the plurality of liquid passageways, each one of the first plurality of elongate slots extending in the cross-

machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid passageways;

a second equalizer plate (Fig 4, #43) positioned downstream from the first equalizer plate, the second equalizer plate having a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots;

Claim 12: a sheet-forming plate downstream of the second equalizer plate, the sheet-forming plate having at least one curved surface positioned for intercepting liquid exiting from the first plurality of throughholes (Fig 4, #s 48 and 49);

Claim 14: the first plurality of throughholes are arranged in substantially parallel first and second rows in the cross-machine direction (Fig 4);

Claim 15: a sheet-forming plate downstream of the second equalizer plate, the sheet-forming plate having first and second curved surfaces each positioned for intercepting liquid exiting from a corresponding one of the first and second rows of the first plurality of throughholes (Fig 4, #s 48 and 49).

15. Claims 1-2, 4-5, 7-8, 10-11, 13-14 and 16-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Haynes et al (2002/0126454).

Claim 1: an apparatus for distributing material supplied from inlets in a cross-machine direction (Fig 1);

a first linear flow equalizer including a first plurality of flow passageways (Fig 1, #116) of substantially equal length that divide a flow of a first thermoplastic material

supplied from the plurality of liquid inlets into individual streams having a spaced relationship in the cross machine direction;

Claim 2: a spinneret communicating with the passageways (Fig 1, #149);

Claim 4: a first plurality of elongated slots each extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid inlets (Fig 4, #124);

a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 4, #126);

Claim 5: a second plurality of elongated slots (Fig 5, #134) each extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the first plurality of throughholes;

a second plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the second plurality of elongated slots (Fig 5, #136);

Claim 7: the first plurality of flow passageways divide the flow of the first thermoplastic material supplied from the plurality of liquid inlets into individual streams having a spaced relationship in a machine direction orthogonal to the cross-machine direction (Fig 1);

Claim 8: a linear flow equalizer for distributing thermoplastic material supplied to a spin pack of a meltspinning apparatus having a cross-machine direction;

an inlet plate having a plurality of liquid passageways spaced substantially equidistantly from each other in the cross-machine direction (Fig 1, #110);

a first equalizer plate positioned (Fig 3, the portion of #110's underside #119) downstream from the inlet plate and having a first plurality of elongated slots each centered about one of the plurality of liquid passageways, each one of the first plurality of elongate slots extending in the cross-machine direction and including opposed closed ends substantially equidistant from one of the plurality of liquid passageways;

a second equalizer plate positioned downstream from the first equalizer plate, the second equalizer plate having a first plurality of throughholes each substantially registered in alignment with one of the opposed closed ends of a corresponding one of the first plurality of elongated slots (Fig 4, #120);

Claim 10: flow paths from each of the plurality of liquid passageways to each of the first plurality of throughholes are substantially equal and substantially symmetrical in the cross-machine direction (Figs 1 and 7);

Claim 11: a third equalizer plate (Fig 1, #130) downstream from the second equalizer plate, the third equalizer plate having a second plurality of elongated slots each substantially centered in the cross-machine direction about one of the first plurality of throughholes, each of the second plurality of elongate slots having opposed closed ends substantially equidistant from one of the first plurality of throughholes;

a fourth equalizer plate downstream from the third equalizer plate (Fig 1, #140), the second equalizer plate having a plurality of second throughholes each substantially

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registered in alignment with one of the opposed ends of a corresponding one of the second plurality of elongated slots;

Claim 13: the first plurality of elongated slots are arranged in substantially parallel first and second rows in the cross-machine direction (Figs 1 and 7);

Claim 14: the first plurality of throughholes are arranged in substantially parallel first and second rows in the cross-machine direction (Figs 1 and 7);

Claim 16: the inlet plate includes a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Figs 1 and 7);

Claim 17: each of the plurality of liquid-carrying channels includes a plurality of intersecting linear segments that extend symmetrically in the cross-machine direction (Figs 1 and 7);

Claim 18: the plurality of linear segments extend symmetrically in a machine direction orthogonal to the cross-machine direction (Figs 1 and 7);

Claim 19: the plurality of liquid-carrying channels branch such that the first plurality of throughholes are arranged in substantially parallel first and second rows aligned in the cross-machine direction (Figs 1 and 7);

Claim 20: the inlet plate includes a downstream surface carrying the plurality of liquid-carrying channels, and a second plurality of throughholes upstream of the first equalizer plate, each of the second plurality of throughholes substantially registered in centered alignment with one of the first plurality of elongated slots (Figs 1 and 7);

Claim 21: a third equalizer plate downstream of the inlet plate, the third equalizer plate having a plurality of liquid-carrying channels coupling one of the plurality of liquid passageways in fluid communication with a central liquid inlet passageway (Figs 1 and 7);

Claim 22: each of the plurality of liquid-carrying channels includes a plurality of intersecting linear segments that extend symmetrically in the cross-machine direction (Figs 1 and 7);

Claim 23: the plurality of linear segments extend symmetrically in a machine direction orthogonal to the cross-machine direction (Figs 1 and 7);

Claim 24: the plurality of liquid-carrying channels branch such that the first plurality of throughholes are arranged in substantially parallel first and second rows aligned in the cross-machine direction (Figs 1 and 7).

References of Interest

16. Haggard et al (5,851,562) and Hagen et al (RE35,108) are cited of interest to show the state of the art.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the Examiner by telephone are unsuccessful, Mr. Duane Smith can be reached at (571) 272-1166. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph S. Del Sole

Joseph S. Del Sole
September 15, 2005